Claims

1. A fusion molecule which comprises an antigen, a transmembrane region and the cytoplasmic region of a chain of an MHC molecule.

2. The fusion molecule as claimed in claim 1, where the fusion molecule comprises no binding domain of a chain of an MHC molecule.

3. The fusion molecule as claimed in claim 1 or 2, where the transmembrane region is derived from an MHC molecule.

4. The fusion molecule as claimed in any of claims 1 to 3, where the transmembrane region and cytoplasmic region comprise a sequence which corresponds to the transmembrane region connected to the cytoplasmic region of an MHC molecule.

5. The fusion molecule as claimed in any of claims 1 to 4, where the fusion molecule additionally comprises a leader sequence.

6. The fusion molecule as claimed in claim 5, where the leader sequence is derived from an MHC molecule.

7. The fusion molecule as claimed in claim 5 or 6, where the fusion molecule has the following arrangement: N terminus - leader sequence/antigen/ transmembrane region/cytoplasmic region - C terminus, where the individual regions may optionally be separated from one another by linker sequences.

8. The fusion molecule as claimed in any of claims 1 to 7, where the antigen comprises a plurality of antigens.

9. A nucleic acid which codes for a fusion molecule as claimed in any of claims 1 to 8.

10. A host cell which comprises a nucleic acid as claimed in claim 9.

11. A pharmaceutical composition which comprises one or more fusion molecules as claimed in any of claims 1 to 8 and/or one or more nucleic acids as claimed in claim 9 and/or one or more host cells as claimed in claim 10.

12. The pharmaceutical composition as claimed in claim 11 in the form of a vaccine.

13. A method for increasing the amount of MHC/peptide complexes in a cell, where the method comprises the provision of one or more fusion molecules as claimed in any of claims 1 to 8 and/or of one or more nucleic acids as claimed in claim 9 for the cell.

14. A method for increasing the presentation of cell surface molecules on cells which are able to present antigens, in particular B cells and macrophages, where the method comprises the provision of one or more fusion molecules as claimed in any of claims 1 to 8 and/or of one or more nucleic acids as claimed in claim 9 for the cells.

15. The method as claimed in claim 13 or 14, where the increase in the amount of MHC/peptide complexes or increase in the presentation of cell surface molecules in turn enhances the primary activation of T cells, in particular of CD4+ and CD8+ lymphocytes, which respond to the antigen.

16. A method for inducing an immune response in a living creature, where the method comprises the

administration of one or more fusion molecules as claimed in any of claims 1 to 8 and/or one or more nucleic acids as claimed in claim 9 and/or one or more host cells as claimed in claim 10 to the living creature.

17. A method for stimulating or activating T cells, in particular CD4+ and CD8+ lymphocytes, preferably in a living creature, where the method comprises the provision for the T cells or administration to the living creature of one or more fusion molecules as claimed in any of claims 1 to 8 and/or one or more nucleic acids as claimed in claim 9 and/or one or more host cells as claimed in claim 10.

18. A method for the treatment, vaccination or immunization of a living creature, where the method comprises the administration of one or more fusion molecules as claimed in any of claims 1 to 8 and/or of one or more nucleic acids as claimed in claim 9 and/or of one or more host cells as claimed in claim 10 to the living creature.